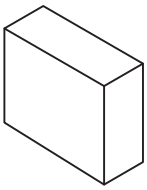
ReadyBlock®

Material Datasheet

2000 SOLID DENSE MIDI BLOCK STANDARD FINISH

With the ReadyBlock® range of Dense and Lightweight Aggregate Blocks from CEMEX, you are assured to find the building solution you need. Our blocks can be used with confidence in a wide variety of internal and external applications. Our quality assured manufacture ensures that ReadyBlock® units are of a consistent and superior quality to meet the requirements of all European and British standards.



Size available (in mm)

Length	Height	Width
290	215	140

Block Weights (kg)*	140
Dry	17.1
3% Moisture Content	17.6

*These figures are a national average and variations may occur geographically, please contact your nearest Sales Office for more precise block weights.

ReadyBlock® Sales Office:
North: 01236 822461
South: 01298 22244

ReadyFloor® Beam and Block Flooring System:
Tel: 01179 373740

Product Specifications

CEMEX READYBLOCK® TO BS EN 771–3:2003

'Aggregate Concrete Masonry Units Category 1 (dense and light-weight aggregates)'

CATEGORY :	AGGREGATE CONCRETE MASONRY UNIT	
DIMENSIONAL TOLERANCES :	Category	D1 (+3mm, -5mm)
	Flatness	No Performance Determined
	Plane Parallelism	No Performance Determined
COMPRESSIVE STRENGTH :	Mean 7.3 N/mm², 10.4 N/mm², 17.5 N/mm², Other strengths available on application	
MOISTURE MOVEMENT COEFFICIENT :	= < 0.5 mm/m	
BOND STRENGTH :	Fixed Value, 0.15N/mm²	
REACTION TO FIRE :	Class A1	
WATER ABSORPTION :	No Performance Determined	
WATER VAPOUR PERMEABILITY(EN 1745) :	5/15 µ	
GROSS DRY DENSITY :	1960 kg/m³	
NET DRY DENSITY :	1960 kg/m³	
THERMAL CONDUCTIVITY :	Int, 1.29 W/mK Ext, 1.38 W/mK	
DURABILITY AGAINST FREEZE-THAW :	No Performance Determined	
DANGEROUS SUBSTANCES :	Information on dangerous substances will only be given when and where required and in the appropriate form.	

Features and Benefits

- Have versatility to be used in a wide variety of internal and external applications
- Allows use above and below the ground, where strength and durability are prime considerations
- Typically used in cavity or solid wall constructions, they are also ideal for use in internal load bearing walls and ReadyFloor® Beam and Block Floor system
- Have excellent sound insulation and air permeability properties
- Provide an excellent key for secondary finishes and fixings
- Inherent thermal mass acts as a heat store
- Meets the requirements of one-man handling
- Ideally suited for constructing corners and to maintain uniformly spaced perpendicular joints

CEMEX

CEMEX UK Building Products Ltd
CEMEX House, Evreux Way, Rugby, Warwickshire CV21 2DT

ReadyBlock®

Delivery and Storage

Blocks are normally delivered to site in banded packs on crane-offload road vehicles. Where requested packs can be delivered shrink-wrapped and/or palletised to aid subsequent site movement activities. All packaging should be disposed of carefully in accordance with local environmental requirements.

If possible, delivered blocks should be stacked in planned locations on the site. This reduces the double-handling of the blocks.

Packs should be stacked carefully onto a prepared, clean, firm area to minimise soiling and damage. They should also be protected from inclement weather and passing vehicles. Allow air to circulate through and around the stacks.

Health and Safety

Care and attention should be given to the working area to minimise accidents. Further information may be found in HSE Construction Sheet 37-Handling Building Blocks.

Safe lift/build heights will vary dependant upon the block type, thickness, etc. Weather conditions can also affect lift heights and restrictions may be needed due to forecasted windy weather. Generally, lift heights should not exceed 6 full block courses in a single working day. For cavity wall construction, the 2 leaves should be built up together and the difference in leaf height, at any stage during construction, should generally not exceed 675mm.

A separate material safety datasheet for precast concrete products is available from CEMEX.

Blocklaying

General Construction: The building of masonry walling should be to the workmanship guidance given in BS 8000-3.

Walls Below DPC: Dense Blocks can be used below DPC and ground level as noted in Table 12 of BS 5628-3.

Laying in cold weather conditions: Blocks should not normally be laid when the temperature is at or below 3°C and falling or 1°C and rising.

Laying: Solid blocks should be laid on a full bed of mortar and the cross/perpend joints fully filled. When necessary, adjust the consistency of the mortar to suit the suction of the blocks.

Bond: Blocks should be laid to achieve a good bond, normally not less than one quarter the block length. In certain situations, consideration should be given to the addition of bed joint reinforcement.

Cutting and Chasing: Where cutting of blocks is required on-site, the use of a central cutting area should be encouraged. Vertical chasing in blockwork should not exceed one third of the block thickness and horizontal chasing one sixth. Back to back chases should be avoided.

Jointing: Mortar joints should be struck off as work proceeds. Where subsequent rendering or plastering is to take place, then rake out the joints to a depth of 15mm to act as a mortar key. Flush joints are recommended for facing work. Lightly tooling the joints highlights the arrises of the blocks and hence the coursing, scale and appearance of the finished wall. Raked joints should be used with caution.

Use in Sulfate Soils: Dense Blocks can be used in chemically aggressive ground conditions up to & including Class DS-3 as detailed in BRE Special Digest 1.

Mortar: Mortar should be specified in accordance with Cl. 5.7 of BS 5628-3. To limit the visual impact of shrinkage cracking, the weakest mortar specification appropriate to the structural design should be chosen.

Finished Work

Protection of finished work: All blockwork should be protected from inclement weather and other on-site practices. Suitable protective sheeting should be placed over the blockwork and firmly tied into place. Care must be taken to protect the work from frost damage or rapid drying out.

Movement Control: After construction, buildings are subject to small dimensional changes due to settlement, temperature change, moisture movement & carbonation. To account for this, movement joints should be provided in accordance with the recommendations of BS 5628: Part 3. Generally, they are required at intervals of 6-8m for external work. Movement joints are not normally required for basic domestic dwellings. Consideration for the location of movement joints should be given:

- At changes in wall height or thickness
- At changes of loading conditions
- At abutments of walls and columns and junctions of dissimilar materials
- To align with movement joints in concrete floor slabs
- Between 1m & 3m from a corner
- At locations of chases, recesses & openings

In areas of concentrated stress, such as above and below openings, consideration should be given to the use of mortar joint bed reinforcement.

Render: All work should conform to recommendations stated in BS EN 13914-1- External Rendering. In conditions of severe exposure, 3 coat work is recommended with a total thickness of 20mm. Allow adequate drying time between finishes or coats.

Plastering: All work should conform to the recommendations stated in BS EN 13914-2:2005 - Internal Plastering. The surface of 2000 Solid Dense Standard Finish ReadyBlock® provides a good key for all types of plaster. Dry-lining systems are compatible with the ReadyBlock® range.

Painting: 2000 Solid Dense Standard Finish Midi Block is not intended to be directly painted. Where a paint finish is required a plaster or render finish should first be applied.

Fixing: The ReadyBlock® range provides an excellent medium for most types of fixings and readily accepts masonry nails, plugs or screws.

Efflorescence: Concrete products with high cement content may suffer the temporary phenomenon of efflorescence. This is not detrimental to the performance of the product and no responsibility can be accepted for its occurrence.

Sustainability

At CEMEX our environment matters, and the thermal mass of our ReadyBlock® range not only could reduce the need for air-conditioning in the summer but could also reduce the consumption of winter heating fuel by capturing solar gains.

FAQ's

Q. What is the U value (thermal performance) of ReadyBlock®?

A. Individual blocks do not have U Values. A U Value is determined by the type and thickness of each of the elements used to construct the wall, including airspaces. Extensive thermal insulation data is given in BRE Special Digest (SD4) 'Masonry walls and beam and block floors' available free of charge from CBA, alternatively, call our ReadyBlock® Helpline Tel: 0800 667 827.

Q. What is the life expectancy of aggregate blockwork?

A. It has been shown over a period of many decades that if protected from aggressive chemical or abrasive situations, concrete blockwork does not deteriorate with time.

Q. Are 2000 Solid Dense Standard Finish Midi Block suitable for the construction of party walls as regards sound insulation?

A. When built as a 50mm cavity wall midi blocks have sufficient mass to comply with the recommendations of Part E of the Building Regulations. The mass requirement is also achieved by constructing a 215mm wide solid wall by laying the blocks 'flat'.

For more information contact our ReadyBlock® Helpline Tel: 0800 667 827.